

Appl. No. 10/763,146
Amdt. dated July 27 2005
Reply to Office action dated Apr. 27, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

- 1-21. (canceled)
22. (new) An electronic assembly, comprising:
 - a copper member disposed on a semiconductor wafer surface;
 - a layer of nickel disposed on the copper member;
 - a solder member disposed on the nickel layer, comprising a first region and second regions;
 - the first region containing nickel, gold, and copper, adjacent the nickel layer;
 - the second regions containing nickel, gold, and copper, dispersed in the solder member;
 - the nickel content in the first region being higher than in the second region; and the gold content in the first region being lower than in the second region.
23. (new) The electronic assembly of claim 22, in which the first region and the second regions comprise intermetallic compound Cu₆Sn₅.
24. (new) The electronic assembly of claim 23, in which gold and nickel are dissolved in the intermetallic compound Cu₆Sn₅.
25. (new) The electronic assembly of claim 22, in which the gold content in the first and second regions is up to about 10 atomic percentage (at%).
26. (new) The electronic assembly of claim 22, in which the boundary between the copper member and the nickel layer is substantially continuous.